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AUTHOR	Sturm, Pamela S.
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ABSTRACT

This report examined the impact of a four-year public college, West Virginia State College, on the local community and graduates. It discusses the economic benefits of a college degree in regard to the individual graduate and the society as a whole, noting that college graduates have significantly higher lifetime earnings than individuals with less than a college education. Though a relatively small institution when compared to the state's universities, the college's economic impact on the Kanawha Valley was approximately $54 million. This included nearly $26 million in direct local expenditures (by the college itself, staff, students, and visitors) and over $28 million in indirect local expenditures (second-round spending by recipients of direct expenditures). During fiscal year 1994-95, the college employed 497 faculty and staff and indirectly created an additional 3,720 jobs in the local economy. The college also provided significant community services to the region. (MDM)

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THE IMPACT OF WEST VIRGINIA STATE COLLEGE ON THE KANAWHA VALLEY: A CASE STUDY OF THE BENEFITS OF HIGHER EDUCATION

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by Pamela S. Sturm, M.A.

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THE IMPACT OF WEST VIRGINIA STATE COLLEGE ON THE KANAWHA VALLEY: A CASE STUDY OF THE BENEFITS OF HIGHER EDUCATION

by Pamela S. Sturm

INTRODUCTION

An institution of higher education impacts a community in many ways. The institution's primary impact, of course, is providing the opportunity of higher education. But there are other impacts not as well understood. This study examines some of the impacts higher education institutions have on the individuals they graduate and some of the impacts the institutions have on the communities where they reside. Many of the impacts on the community and individual graduates can be explain in terms of monetary benefits. Other impacts can be explained in terms of community and individual quality of life issues, money not being the measure of all things. No matter how the impacts are examined, they are surprisingly immense.

In an era of budget cuts and accountability, the author hopes to illustrate that continuing to support the availability of higher education to all members of society is one of the most prudent investments for governments, communities and students.

The author studied the impacts of a four-year public college, West Virginia State College, on its local community and graduates. The societal contributions of this type of institution are often overlooked as the giant state universities consume more media attention. Smaller public colleges are often the unsung heroes in higher education. These institutions provide quality, accredited education to the local citizens at an affordable cost. They educate the first generation of families to go to college. The four-year public colleges understand the special needs of socioeconomically disadvantaged students and how to accommodate those needs. For these reasons, and for reasons of simplicity, the author chose West Virginia State College as an institution that could be used to demonstrate the daily contributions of higher education without dealing with the complex issues involved with larger graduate school and research institutions. Further, as an administrator at the College, the author had unimpeded access to required information for this paper.

As you read about the impact West Virginia State College has on the Kanawha Valley (the community in which the College resides), think about the hundreds of such colleges across this nation that quietly change the lives of generations with little fanfare, year after year. In the examination of some of the secondary benefits discussed below, keep in mind how well such institutions accomplish their primary mission of education. The fact that West Virginia State College has the longest continuous accreditation record in the state, dating back to 1927, attests to the quality education provided by such an institution.

SECTION I: THE IMPACT ON THE GRADUATE

The economic benefit to graduates can be monetarily quantified in terms of an investment. If one views the time and money a student spends on earning a college degree as an investment, one can then study the return on this investment. Studies that measure the financial benefits of higher education as a monetary investment are known as "rates-of-return" studies.

There are two types of rates-of-return studies, those that measure the rate-of-return for the individual and those that measure the rate-of-return for society. Both studies generally emphasize the economic gain as the primary benefit. Specifically the studies will ask, does the increased earning potential justify a person's investment in higher education or does the economic benefit to the public justify expenditure of public resources? In this section, the rate-of-return to the individual will be examined.

In the individual rate-of-return study, the student's costs in terms of tuition and fees, books, supplies, net forgone income (earnings lost while enrolled in college) and other educationally related expenditures are equated to a dollar amount. That figure becomes the student's monetary investment in the college degree (in the same way putting money in a savings account is an investment). An annual expected return rate is then calculated for the investment, similar to the interest rate of a savings account.

In 1986, Larry L. Leslie from the University of Arizona and Paul T. Brinkman from the National Center for Higher Education Management Systems reviewed over one hundred rates-of-return studies that spanned a twenty-year time period[1]. For a baccalaureate degree, Leslie and Brinkman found an average individual rate-of-return of 11.8 percent. Because of methodological limitations, estimated rates-of-return are considered to be conservative. In other words, the real rate-of-return may actually be greater.

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[1] John C. Smart, ed., Higher Education: Handbook of Theory and Research (New York: Agathon Press, Inc., 1986), vol. II, "Rates of Return to Higher Education: An Intensive Examination", 207-234.

According to Leslie and Brinkman, most analysts select a 10 percent individual and public rate-of-return as suitable for the degree of risk represented by the investment. Thus, the 11.8 percent individual return rate compares favorably to conventional benchmark rates for alternative investments (i.e. stocks, mutual funds), especially if one considers the risks of other types of investments.

There are numerous statistics to confirm the economic wisdom of this investment for the college graduate. Here are just a few:

> "Between 1972 and 1992, both high school dropouts and [high school] graduates who did not go on to college became more likely to receive AFDC [Aid to Families with Dependent Children] or public assistance."[2]

Specifically, in 1992, among persons in the U.S. aged 25-34 with 9-11 years of schooling, 17.1 percent received public assistance, whereas only 0.5 percent of the population in that age group with 16 or more years of schooling received public assistance. Thus, of the 537 graduates of West Virginia State College in 1992, only two to three of those graduates can be expected to have public assistance as a source of income.

> "Between 1975 and 1992, the expected lifetime earnings of high school graduates barely kept pace with inflation. During this 18-year period, real wages rose above inflation only for those with a college degree.
>
> "In 1992, the average annual earnings for persons with a college degree was $32,629, compared with average earnings of $18,737 for those with only a high school diploma.
>
> "College graduates are much more likely to be employed than those without a college degree. In 1994, the unemployment rate for high school dropouts was about 10 percent. A high school diploma cut that rate in half (5.4 percent). A college degree cut the rate in half once again (2.6 percent)."[3]

Now consider the quality-of-life benefits to the college graduate. West Virginia State College conducts a graduate exit survey at the end of each semester. The survey asks graduating seniors a broad range of questions

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[2]U.S. Department of Education, National Center for Education Statistics. The Condition of Education, 1995. Washington, D.C.: 1995.

[3]"Education: A Good Future Investment," Higher Education and National Affairs, 6 February 1995, 2.

concerning their collegiate experience. A recent report[4] prepared by the institution's office of student assessment summarized five years worth of data from this survey (1989-1994).. Responding graduates stated that their academic and personal growth were significantly enhanced by their collegiate experience. Nine out of ten graduates reported significant gains in critical thinking, communication skills (speaking and writing), independent learning skills, skills for adapting to change, knowledge and workplace skills. Eight out of ten reported significant gains in understanding and respecting human differences, using information tools, understanding and defining values, understanding the influence of history, and significant gains in the development of social/interpersonal skills.

The College also conducts an annual ACT Alumni Survey (a national standardized survey developed by the American College Testing Program), of all graduates for the past five years. The results of this survey consistently indicate that graduates place a high value on the education they received. For instance, in the 1994 ACT Alumni Survey[5], when asked "Regardless of financial benefits, has your college education improved the quality of your life? ," 55 percent of the respondents said "definitely yes" and 32.1 percent said "probably yes."

A great amount of research supports the "quality-of-life" benefits of higher education[6]. It is known that educational level is associated with better health, each additional year of schooling beyond high school appearing to extend life by 0.4 percent (almost 3 percent for a Ph.D. graduate). Those with advanced schooling experience less work disability. The children of college educated women are generally more healthy. When combined with the mother's "home investment" (reading, writing and storytelling), her education appears to raise her children's IQ considerably. Further, the parents' education contributes to the number of years of college planned by their children.

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[4]Fordham, D. A., "The WVSC Graduate Exit Survey Report: 1989 - 1994", TD, February 1995, Office of Student Assessment Collection, West Virginia State College, Institute, WV.

[5]Sturm, Pamela S., "West Virginia State College 1994 ACT Alumni Survey", TDS, April 6, 1995, Office of Information Management and Analysis files, West Virginia State College, Institute, WV.

[6]For a full discussion of the research on these issues and a complete source listing, see Smart, Higher Education: Handbook of Theory and Research, vol.II, 227-234.

Education is related positively to how wisely people handle their money (i.e. savings, investment management and the willingness to take financial risks). The more educated tend to be wiser spenders, indirectly enhancing their incomes between 10 and 50 percent. They have fewer unplanned children. Their jobs are more interesting, challenging and more likely to lead to advancement. Unemployment is less likely and depreciation of one's human capital (e.g., formal education), as well as obsolescence of job skills, is slower. They also place less importance on "luck" and "connections" in their employment behaviors.

Thus, whether viewed from a quality-of-life perspective or from an economic perspective, it is clear that college graduates can expect substantial benefits from their investment.

SECTION II: THE BENEFIT TO THE COMMUNITY

Again, the economic benefits will be examined first. As was mentioned in Section I, the other type of rate-of-return study is the public rate-of-return for the taxpayers investment in higher education. Leslie and Brinkman[7] found an average public rate-of-return of 11.4 percent. Again, this compares favorably with conventional benchmark rates for alternative investments. Thus, when viewed as an investment, tax dollars spent on higher education pay healthy dividends.

But there are other more direct economic impacts on the local community in which a college resides. These economic benefits can be specifically calculated for any given fiscal year of the college through a type of study known as an economic impact study[8].

The author conducted such a study[9] for the 1994-1995 fiscal year of West Virginia State College. The local community for this economic impact study was defined as the "Kanawha Valley,"[10] a seven-county region in West Virginia that constitutes the College's service area. According to 1990 census data, the region has a population of about 353,000 consisting of one metropolitan area (Charleston, the state capital) and many small towns and rural communities.

At the time the study was conducted, the College had 497 employees (staff and faculty) and an enrollment of about 4,500. Though a relatively small institution when compared to the state's universities, its economic impact on the local economy was over $54 million.

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[7]John C. Smart, ed., Higher Education: Handbook of theory and Research (New York: Agathon Press, Inc., 1986),vol. II, "Rates of Return to Higher Education: An Intensive Examination", 207-234.

[8]John Caffrey and Herbert H. Isaacs, Estimating the Impact of a College or University on the Local Economy (Washington, D.C.: American Council on Education, 1972).

[9]The majority of the results for the study were calculated from college records and responses to an economic impact study survey the author conducted in the summer of 1995. The survey was sent to all college employees and students, and gathered data concerning their expenditures in the local economy. The author used a modified version of the Caffrey-Isaacs model to calculate the College's economic impacts. The modified version uses only the portions of the full model that measured positive impacts.

[10]The Kanawha Valley was defined, for the purpose of the economic impact study to be the West Virginia counties of Kanawha, Putnam, Lincoln, Boone, Clay, Roane, and Jackson.

Consider the findings of the economic impact study.

Total Monetary Impact on the Economy: $54,222,887

The total monetary impact was calculated to be $54,222,887. What does this number mean? It means that because of the existence of the College, $54.2 million more flowed through the local economy. How was the total impact estimated? The number is the sum of the direct local expenditures ($25,820,422) and the indirect local expenditures ($28,402,465) attributable to the presence of the College. Understanding this sum is important since the two numbers, direct and indirect local expenditures, tell the full story of how the institution affects the local economy.

Consider each of these numbers now separately.

Direct Local Expenditures: $25,820,422

The direct local expenditures' total of $25,820,422 represents the sum of those expenditures made by the College itself ($5,420,603), the staff and faculty ($12,308,078), the students ($5,823,441) and visitors to the College, i.e. the money alumni spent at local hotels during homecoming ($2,268,300). Thus, direct local expenditures is rather a straight forward concept.

Indirect Local Expenditures: $28,402,465

The concept of indirect local expenditures is more involved. The indirect local expenditures' total represents second-round spending (the multiplier effect) brought about by the presence of the College. In other words, because of the above stated direct expenditures for goods and services, additional business volume activity is stimulated. Thus, for each dollar directly spent by the College, one of its employees, students or visitors, a proportion of that dollar will be re-spent in the local economy thereby increasing the dollars original impact.

For example, if the College contracted a local tree-cutting company to prune all the trees on campus and paid the company $5,000 for this service, the company, because it now has this additional work, might go to the local

hardware store and spend $500 for additional tree cutting supplies. The hardware store then, indirectly benefits from the original $5,000 expenditure. Similarly, the hourly employees of the tree-cutting company benefit indirectly from the $5,000 since they have wages they would not otherwise have without the additional work. The hourly employees then spend a proportion of these additional wages in local stores. Thus the local store indirectly benefits from the $5,000 direct expenditure. Of course, the example greatly simplifies very complicated calculations of cash flow through an economy. Nonetheless, the example is true to the concept.

Without discussing the details of the indirect cash flow calculations,[11] the indirect expenditures' total of $28,402,465 is the sum of the purchases from local sources by local businesses in support of their West Virginia State College business volume ($7,746,127) - how much the hardware store received in the above example - and the local business volume stimulated by the expenditure of College-related income by local individuals, other than staff, faculty or students ($20,656,338) - how much the local store received from the hourly workers in the above example.

Other economic impacts calculated in the study are:

Expansion of the Local Banks' Credit Base: $12,636,285

Because of the checking and savings deposits made by the College, students, staff and faculty in local banks, it was calculated that the local banks had an additional $12,636,285 to use for loans and other credit related operations.

Number of Jobs Created: 4,217

During FY 94-95 the College employed 497 people. An additional 3,720 jobs were created in the local economy because of College expenditures and the additional demand on governmental services created by college-related persons.

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[11] See John Caffrey and Herbert H. Isaac, Estimating the Impact of a College or University on the Local Economy (Washington, D.C.: American Council on Education, 1972).

Personal Income of Local Individuals from College-Related Jobs and Business Activities: $28,721,658

This figure includes the personal income of staff, faculty and persons with jobs in the local economy that are attributable to the College.

Durable Goods Procured with Income from College-Related Jobs and Business Activities: $861,650

The figure of $861,650 was calculated by multiplying the proportion of total income typically used to purchase durable goods (such as refrigerators, lawnmowers) by the total personal income of local individuals from college-related jobs and business activities.

Further statistics along these lines underscore the community economic benefits:

> "Because college graduates earn more, they usually have greater financial resources and are unemployed less frequently. Graduates also make fewer demands on the public purse for needs such as unemployment compensation and health care.
> "Wage earners with incomes approaching $50,000 a year (the median for college-educated men) are far more likely to be paying the highest marginal tax rates than wage earners with incomes below $30,000 or $20,000 (the medians for male high school graduates and dropouts).
> "The extension of higher education to greater numbers of Americans has been an important component of national economic growth. In this century, increases in the educational attainment of the work force accounted for 27 percent of the growth in the nation's wealth."[12]

Clearly, the economic impact to the communities in which colleges reside is substantial. Consider now some of the communities' quality-of-life benefits brought about by the existence of the college.

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[12] "Education: A Good Future Investment," Higher Education and National Affairs, 6 February 1995, 2.

"There is also considerable literature on the external benefits of education, that is, the 'spillovers' or benefits gained by society from the education of individuals. The direct pecuniary benefits of that education are presumably captured in the social rate of return calculations that reflect extra taxes paid by the more highly educated; however, productivity gains realized through a highly educated work force and nonpecuniary gains that spill over from individuals to society must be taken into account...

Education, especially inequality in education, has been observed to have an effect on the crime rate, the theory being proved when crimes of 'profit' are separated from other crimes; that is, the relationship of (lack of) education to crime can be demonstrated for crimes of profit [i.e. theft] but not for profitless crimes [i.e. rape] when other factors are controlled. The better educated are also more able to prevent crimes (Erlich, 1975). Education reduces juvenile delinquency (Spiegelman, 1968). The cost of crime that can be associated with the educational deficiencies of adult prison inmates was put at $19.8 billion for 1982 (Webb, 1977).

High welfare and Medicaid costs have been associated with low educational levels (Garfinkel and Haveman, 1977, p. 53). Higher levels of education seem to yield greater liberality on issues such as integration and freedom for youth (Beaton, 1975), and many community agencies enjoy voluntary assistance and leadership that come heavily from more highly educated groups (Weisbrod, 1962).

A reading of this literature leaves one with the distinct impression that traditional rates-of-return estimates almost invariably understate the true social rates of return."[13]

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[13] Smart, Higher Education: Handbook of Theory and Research, vol. II, 228.

The implications of the above research in terms of West Virginia State College and the Kanawha Valley are self evident, particularly when one considers that approximately 86 percent of the College's graduates will remain in the Valley at least five years after graduation.[14] But there are still more benefits to the community because of the existence of the College. Almost all higher education institutions maintain a tradition of community service. In fact, community service is often a factor during the tenure evaluation of faculty.

Consider some of the community service activities of West Virginia State College during the 1995 academic year:

- The College continued to expand its Metro Area Agency on Aging (MAAA) and its service to seniors in an eleven-county area. An advocacy for older persons, the MAAA identifies the needs of the elderly and plans for meeting those needs through a system of in-home and community services which enable the elderly to maintain their independence.

- College staff provided needs assessment, college information sessions, GED training, newsletter writing, organizational management training and grant writing assistance to residents of six public housing communities and numerous nonprofit organizations in the Charleston, West Virginia metropolitan area.

- The College established its "Aspiring Women Program" to serve economically and academically disadvantaged women and established its "Institute of Local Government" to meet the educational and training needs of state and local government workers.

- College staff served as judges for a local high school's social studies fair.

- The financial aid office conducted financial aid workshops for area high schools.

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[14] "Sturm, "West Virginia State College 1994 ACT Alumni Survey."

- The College and C & P Telephone Company co-sponsored the Charleston Regional Chamber of Commerce's Small Business Advisory Council.

- The College held a National Youth Sports Camp during the summer of 1995. Part of the National Youth Sports Program, the Camp provided free sports and instructional activities for 279 disadvantaged young people (ages 10 to 16) for a five-week period.

- The College hosted 220 academically high-ranking high school students, including 10 exchange students from Russia, who made up the Governor of West Virginia's Honors Academy. These high school students spent a month at the College, taking advantage of instructional, cultural and recreational activities.

- During the summer of 1995, 93 area high school students took advantage of the College's Upward Bound program which provides for academic enrichment and preparation for college. This program is directed at socioeconomically disadvantaged youths who might not consider college without the intervention and preparation provided by the program.

- The College's speakers bureau published an index listing the expertise of the faculty and staff and distributed the document to area schools and civic organizations. During the 1995 academic year, the staff and faculty made numerous presentations, with topics ranging from women in politics to ESP (extrasensory perception) at schools and civic groups.

As was mentioned in the introduction, the public colleges have a tradition of helping the disadvantaged. Many of the above examples illustrate that point.

SECTION III: IN CLOSING

Whether viewed from a monetary or quality-of-life perspective, higher education impacts communities and individuals in many ways. The most significant impact is the betterment of lives. Further, the years of research have shown that this primary impact is very cost effective. The author hopes that by looking at some of the impact details, the reader will have a greater appreciation for higher education and the quite contributions of public four-year institutions such as West Virginia State College.